635 Insects

JUL -7 1951

Summary of costs etc made 9/10/51 MM 7

S
Control - Inyo
(M't Pine Beetle Control
in Reds Meadow Area)

REDS MEADOW
INSECT CONTROL PROJECT

The Reds Meadow Unit, Mammoth District, Inyo National Forest, has been suffering for several years from the activity of the Mountain Pine Beetle - Dendroctonus monticolae.

While this infestation is in the endemic stage, control work was deemed necessary due to the heavy recreational use of the area. Moreover, the heaviest attack appeared to be in the immediate camp ground areas, which are predominently Lodgepole Pine type.

The project was conducted as follows:

Spotting

After entering the area on skis on May 9th, 1951, Mr. M.M. Furniss, of the Forest Insect Laboratory at Berkeley, assisted Ranger Sweatt and the writer with the initial spotting of the "brood trees".

All trees to be treated were blazed on 3 sides and numbered in consecutive order. In conjunction with the spotting, the area was mapped and the position of the infected trees plotted on this map. A record for each tree was kept on forms supplied by Mr. Furniss.

Ranger Sweatt and Mr. Furniss left in the afternoon of May 11th, and the writer continued with the spotting which was completed in two additional days.

Therefore, the spotting of 48 infected trees required a total of 9 man-days.

Felling

A light winter made it possible to open the road earlier than usual. Therefore we were able to return to the Reds Meadow Area by vehicle on the 25th of May.

The felling, limbing, and bucking were conducted by a 3 man crew - Mr. Verret, Mr. Rockwell and the writer, using power saws.

Limbs and tops were piled when located in the camp grounds, and lopped and scattered when away from camp ground areas.

The trees were bucked above the infested area and as many more times as necessary to facilitate rolling with "Cant Hooks". The felling, limbing and bucking required a total of 18 man-days. However a portion of this time was donated and does not apply to the cost of this project.

JUL -7 1951

Treating

This phase of the work was conducted by a 2 man crew consisting of Rockwell and the writer.

The method employed was to spray the infected logs with a poison solution comprised of 1 part orthodichlorobenzene to 5 parts of diesel fuel. It should be noted that this was a slightly stronger concentration than the 1 to 6 ratio suggested by the Forest Insect Laboratory. This stronger concentration was used because of the cold weather that prevailed at the time of application. It was felt that the stronger concentration would compensate for the retarding action of the cold weather.

Whenever practicable the logs were sprayed on 3 sides and then allowed to lie for a few hours before they were rolled and poisoned on the remaining side. Here it was felt that the circulation of the poisonous vapor would be accelerated by allowing all areas of the logs to be exposed to the sunlight for at least a few hours. Unfortunately, there is no data available at this time as to the relative effectiveness of this method as compared with that where the logs were poisoned and rolled immediately.

Due to its affinity for H_2O, the poison should not be used near lakes or streams if there is any chance of even a small portion of it getting into the water. For this reason, 5 trees that were overhanging water were burned. This proved to be very effective and would no doubt be a very satisfactory method of treatment for all trees if the fire hazard was not such a limiting factor.

As a rule, the work progressed rapidly requiring a total of 6 man-days.

Treatment of Wind throw

As a result of strong winds last fall, the Reds Meadow area suffered heavily from wind throw.

It was felt that treatment of these windthrown trees would reduce the incidence of bark beetle attack that is apt to occur under such conditions.

However, the Forest Insect Laboratory advised us that such treatment was not advisable since the insecticide evaporates long before the threat of attack passes. Therefore, as time and money allowed, the wind throws in the campgrounds were limbed and bucked to increase the disposal action of the campers.

JUL -7 1951

Data and Cost Analysis

Total Time Required ----------39 man days
Total Trees Treated ----------45
Average D B H ----------20 inches
Average Infected Length ----------45 feet
Average Gal. of ortho /tree ----------0.76 gals.
Average Gal. of Mixture/tree ----------4.56 "
Total Expense ----------$500.03
Cost/Tree $11.11
Size of Area ----------1,930 Acres
Location----------Red's Meadow Area
Inyo National Forest
R 26E, T 3 & 4S, M.D.M.

Spotting

Time Required ----------9 man days (4 donated)
Cost ----------5 man days @ $11.60/day=$58.00
$58.00

Felling

Time Required ----------13 man days + 5 donated
Labor Cost ----------6½ man days @ $11.60/day=75.40
6½ man days @ $10.80/day=70.20
$145.60

Equipment Costs

Gas & Oil ----------$8.75
Mileage on P.U. (615 miles)----- 36.96
Miscellaneous ----------31.76
Total------$223.07

Treating

Time Required----------6 man days
Labor Cost ----------3 man days @ $11.60/day=$34.80
3 man days @ 10.80/day = 32.40
$67.20

34 Gal. Ortho (donated)
165 Gal. Diesel Fuel----------22.18
Shipping Charge on Ortho --------20.62
Mileage on P.U. (205 miles) --- 12.31
Miscellaneous ---------- 29.45
$151.76

JUL -7 1951

Windthrow

Time Required ----------6 man days
Cost ----------3 man days @ $11.60/day $34.80
5 man days @ 10.80/day 32.40
Total $67.20

Windthrows limbed & bucked----15
Windthrows not " & " ----85 (Approx.)

GRAND TOTAL $500.05

SUMMARY

While the infestation of Mountain Pine Beetle in the Red's Meadow Area is only in the endemic stage, it is of greater importance than this degree of attack would indicate due to the heavy recreational use in this area.

As far as can be ascertained at this time, the method employed appears to have been quite effective. In all the logs that were checked, the beetles were killed overnight.

It must be recognized that this project did not eliminate the Mountain Pine Beetle from the area. Nor will future projects of equal scope accomplish this end.

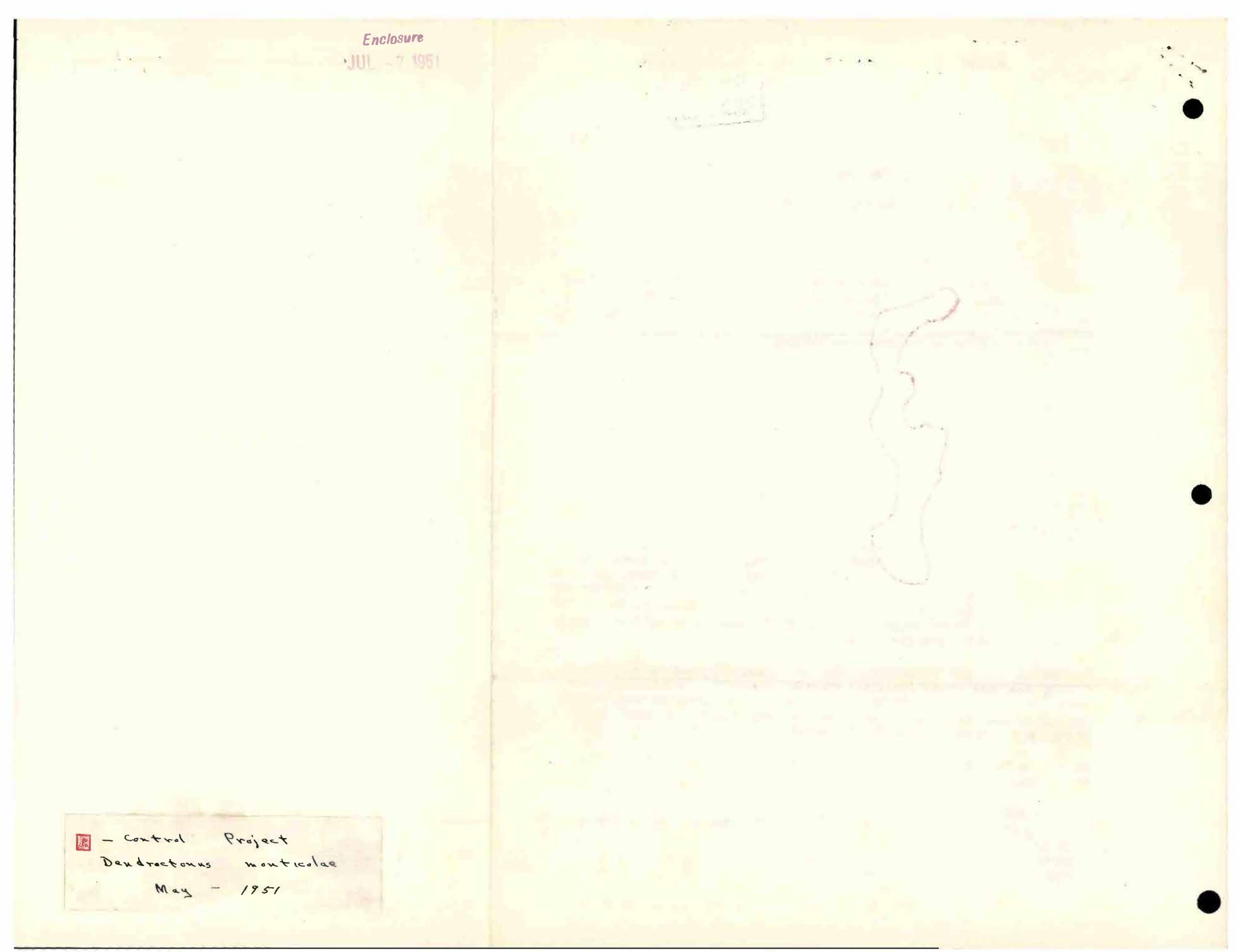
However, an annual program of this sort should reduce the incidence of attack to a point where the esthetic value of the campgrounds will not be destroyed.

It would appear, then, that a project such as the one conducted this year should be established as an annual function.

-Finis-

Roy W. Fountain

Enclosure
JUL - 7 1951



— Control Project
Dendroctonus monticolae
May — 1951

U. S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

MAMMOTH RECREATION AREA

INYO NATIONAL FOREST

CALIFORNIA REGION
1948

Scale
1 0 1 2 3

LEGEND

- National Forest Boundary
- Sierra Wilderness Area Bdry.
- Main Motor Highway
- Good Motor Road
- Poor Motor Road
- Trail
- District Ranger Sta.
- Forest Guard Station
- Public Camp Ground
- Landing Field

Report fires to Supervisor's Headquarters, Ranger or Guard Station

Agnew L.
Gem L.
Sullivan
Fern L.
Yost L.
Clark Lks.
Glass Cr. Mdw.
Glass Cr.
TRAIL
Crest View
ARCULARIUS RCH.
San Joaquin Mtn
11,584
Thousand Isl. L.
Curisa L.
Two Teats
Deadman's
Deer Mtn.
BM 7651
Garnet L.
L. Laura
Shadow Cr.
Shadow L.
Cabin L.
Rosalie L.
Deadman Pass
Inyo Crater Lakes
Dry Cr.
395
L. Ediza
T.3 S.
Agnew Mdws
Castle L.
Minaret L.
Starkweather L.
Minaret
Johnston L.
Back Lakes
Little Antelope Valley
Hot Spr.
Long Valley
BM 7582
MAMMOTH LAKES P.O.
MAMMOTH R.S.
L.A. CAMP
Casa Diablo Hot Spr.
Hot Cr. Spr.
HOT CR. FISH HATCHERY
WHITMORE TUB
Holcolm L.
SIERRA
DEVIL
POSTPILE
NATL
MONUMENT
Mammoth Mtn.
Twin Lks.
Hot Sulphur Spr.
Mammoth Pass
REDS MDWS. G.S.
Ashley L.
Iron Mtn.
11,157
Gertrude L.
Granite Stairway
T 4 S.
L. George
Lake Mary
No. 1 L.
No. 2 L.
CONVICT CR. EXPT. STA.
Convict Lake
RESORT
Crowley Lake
Tejay L.
Lost L.
Laurel Mtn
Gargyle
Lion Pk
Mdw.
Granite Stairway
8840
Skelton L.
Valentine L.
Laurel L.
McGee Mt.
Red L.
Bloody Mt
12592
Lake Genevieve
NATL.
Pumice Butte
Duck L.
Hot Spr.
Mid
Fish
Hot Spr.
BM 11351
Purple L.
Lake Dorothy
Junction Bluffs
T 5 S.
MADERA
FRESNO
Double Pk.
FOREST
Lake Virginia
Red Slate Mtn.
13152
Mt. Morgan
Davis L.
Stanford
T.26 E.
R.27 E.
R.28 E.
R.29 E.